

## **REMARKS**

In response to the above-identified Office Action, Applicants seek reconsideration thereof. In this response, Applicants do not amend, cancel or add any new claims. Accordingly, Claims 1-3, 5-6, 8, 10-12, 14-17 and 19-20 are pending.

### **I. Claims Rejected Under 35 U.S.C. §103(a)**

#### **A. Obvious over Matchett in view of Mukohzaka and Okubo**

The Examiner rejects claims 1-3, 6, 10-12, 15-17 and 20 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,229,764 issued to Matchett, et al. ("Matchett") in view of U.S. Patent No. 5,910,999 issued to Mukohzaka ("Mukohzaka") and U.S. Patent No. 4,461,028 issued to Okubo ("Okubo"). Applicants respectfully traverse the rejection.

To establish a *prima facie* case of obviousness, the prior art references, when combined, must teach or suggest each of the claim elements. See MPEP § 2143. Applicants respectfully submit the combination of Matchett, Mukohzaka and Okubo fails to teach or suggest each of the elements of claims 1-3, 6, 10-12, 15-17 and 20.

Regarding the rejection of claim 1, among other elements, claim 1 defines an apparatus for authenticating a user's identity comprising a data matcher to process biometric data from a data collector to authenticate a user's identity, wherein the data matcher includes:

a database to store a first identity reference for the user, and

a data compiler, coupled to the database, the data compiler to integrate samples of data collected by the data collector collected over time to create a second identity reference, and replace the first identity reference with the second identity reference to establish an updated first identity reference. Applicants respectfully submit the combination of Matchett, Mukohzaka and Okubo fails to teach or suggest at least these elements of claim 1.

The Examiner characterizes Matchett as showing "an authentication process that provides 'biometric checks of a user' (column 3, lines 18-19)...data collecting in 'the recording of a particular user's relevant biometric characteristics' (column 4, lines 58-59), ...matching data through 'the comparison of new biometric data to the user's reference biometric data' (column 4,

lines 65-66)” and “...a database to store a first identity reference for the user (Figures 1 and 4).” Paper No. 8, page 4. The Examiner admits Matchett fails to teach or suggest a data compiler to integrate samples of data collected over time to create a second identity reference and replacing the first identity reference with the second identity reference. See Paper No. 8, page 4. In reviewing Matchett, Applicants agree with the Examiner that Matchett fails to teach or suggest at least a data compiler to integrate samples of data collected over time to create a second identity reference and replacing a first identity reference with the second identity reference to establish an updated first identity reference. The Examiner relies on the combination of Mukohzaka and Okubo to cure the defects of Matchett, however, Applicants respectfully submit the combination of Mukohzaka and Okubo fails to cure the defects of Matchett as the Examiner suggests.

The Examiner characterizes Mukohzaka as showing a fingerprinting system that integrates samples of data over time. See Paper No. 8, page 4 (citing Mukohzaka, column 6, lines 40-63, column 8, lines 14-25 and column 12, lines 41-48). In addition, the Examiner alleges Mukohzaka “discloses the integration of several fingerprint samples over time to create a reference image.” Paper No. 6, page 2 (citing Mukohzaka Col. 4, lines 33-62, Col. 8, lines 63 – Col. 9, line 7 and Col. 12, lines 41-48). Applicants have reviewed Mukohzaka in its entirety and respectfully disagree with the Examiner’s characterization of the cited sections of Mukohzaka. However, as explained below, even accepting the Examiner’s interpretation *arguendo*, the rejection still fails.

Mukohzaka teaches “an individual identification apparatus for confirming identities of individuals by using a pattern recognition technique.” Mukohzaka, Col. 1, lines 9-11. In Column 4, Mukohzaka teaches a first fingerprint is picked up by a charge-coupled device camera to be stored in memory and used as a “reference fingerprint”. See lines 33-50. This process of taking a fingerprint is repeated several times (in the given example, four times) with the person placing his/her finger in (four) different manners. See lines 51-54. “As a result, four different reference fingerprints A, B, C, and D are stored in the frame memory 5 for the same specific person.” Lines 54-56 (emphasis added). “Thus, a plurality of (four, in this example) reference fingerprints are stored for the single specific person in order to enhance flexibility of the apparatus 100 enough to

allow for possible distortions or rotations of the target pattern....” Lines 56-61. “Accordingly, the reference fingerprints can be recorded in the device within a short period of time.” Column 12, lines 43-45.

After the samples are stored, a CPU performs a Fourier transform on the four reference fingerprints to obtain four complex indications. See Column 4 line 62—Column 5 line 20. The CPU then normalizes the transformed images to produce phase-only patterns, further normalizes each phase-only pattern and adds all the normalized phase-only patterns into a multiple filter Multi. See Column 5, line 21—Column 6, line 42. The CPU calculates a phase conjugate Multi\* of the superimposed patterns and stores the Multi\* in memory (RAM and hard drive). See Column 5, lines 42-63. When a target fingerprint needs to be matched, the CPU multiplies the target fingerprint (after it has been normalized) with the reference filter Multi\* and performs an inverse Fourier transform on the multiplied result. See Column 8, lines 14-22. “The inverse Fourier transform result is a correlation image with a correlation representing the degree to which the reference fingerprint and the target fingerprint are similar to each other.” Column 8, lines 22-25.

The Examiner does not cite Mukohzaka as teaching or suggesting replacing a first identity with a second identity created from the integration of the samples collected over time. Applicants in reviewing Mukohzaka in its entirety are unable to find any sections that teach or suggest replacing a first identity with a second identity as defined in claim 1. The Examiner relies on Okubo to cure the defects of Matchett and Mukohzaka, however, Applicants respectfully submit Okubo fails to cure such defects.

The Examiner characterizes Okubo as showing “an identifying device in which a first identity reference is replaced with a second identity reference.” Paper No. 8, page 4 (citing Okubo, Column 6, lines 6-16, Column 4, lines 40-48 and Column 4, lines 61-64). Applicants respectfully submit there is no suggestion or motivation to combine the teachings of Mukohzaka and Okubo.

MPEP § 2143 states, “[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure.” In addition, MPEP § 2143.01 states that the motivation to combine references must be

found in the references and “[t]he mere fact that references can be combined or modified or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination” (emphasis in original). Applicants respectfully submit that the proper motivation or suggestion to combine Mukohzaka and Okubo does not exist.

Okubo teaches systems for identifying objects, such as seal stamps and speech, the characteristics of which tend to change with lapse of time or for some other cause. See Okubo, Column 2, lines 8-11. In Okubo, two reference patterns are stored in memory, an original reference pattern and the latest reference pattern. See Column 4, lines 40-42, Column 4, lines 61-64 and Column 6, lines 6-16). The latest reference pattern is updated every time the pattern is verified to be genuine. See Okubo, Column 4, lines 42-48 and lines 61-64.

As discussed above, Mukohzaka teaches that the reference fingerprints are taken at the initial registration time and are not updated. In Mukohzaka, there is no need to update these reference fingerprints since the reference fingerprints are taken in different manners “in order to enhance flexibility of the apparatus 100 enough to allow for possible distortions or rotations of the target pattern on the FOP 3 during the recognition process.” Mukohzaka Col. 4, lines 56-61.

Applicants respectfully submit that the teachings of Okubo are incompatible with the teachings of Mukohzaka and thus, there is no suggestion or motivation to combine these references. The proper motivation or suggestion to combine is lacking since, in Mukohzaka, there is no need for the reference fingerprints to be updated since the reference fingerprints provide the flexibility that Mukohzaka seeks to make a proper identification. Also, Okubo does not need samples integrated over time since the latest reference is updated every time the reference is verified and integrating samples over time is simply not contemplated by the teachings of Okubo. Combining updating the reference every time the reference is verified and integrating samples collected over time to update a first reference with a second reference are two teachings that are mutually exclusive for the purpose of providing the proper motivation or suggestion to combine in this instance.

In addition, MPEP § 2143.01 also states “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended use, then there is no suggestion or

motivation to make the proposed modification. Applicant respectfully submits combining these references would produce an unsatisfactory inferior product since Mukohzaka's initial reference formed by combining four reference fingerprints would be subsequently updated (replaced) by Okubo's single, latest reference fingerprint, which would be updated by a single, latest reference fingerprint and so forth. Thus, the flexibility of the multiple reference fingerprints desired by Mukohzaka would be completely lost by any subsequent update (replacement) performed on the reference fingerprint and the initial four reference fingerprints would serve no purpose beyond the first verification. Therefore, at least for these reasons, Applicant respectfully submits there is no motivation or suggestion to combine the teachings of Mukohzaka and Okubo to read on the elements of claim 1.

Therefore, for the reasons discussed above, the combination of Matchett, Mukohzaka and Okubo fails to teach or suggest each of the elements of claim 1. The failure of the combination of Matchett, Mukohzaka and Okubo to teach or suggest each of the elements of claim 1 is fatal to the obviousness rejection. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 1.

Claims 3 and 6 depend from claim 1 and include all of the elements thereof. Therefore, claims 3 and 6 are not obvious over Matchett in view of Mukohzaka and Okubo for at least the same reasons as claim 1. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 3 and 6.

Regarding the rejection of claim 10, Applicants respectfully submit claim 10 defines a method comprising storing a first identity reference and collected biometric data in a database, sampling collected biometric data over time, integrating samples of collected biometric data to create a second identity reference and replacing the first identity reference with the second identity reference to establish an updated first identity reference similar to claim 1. Therefore, Applicants respectfully submit the discussion above regarding the combination of Matchett, Mukohzaka and Okubo failing to teach or suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference

being replaced by a second identity reference is equally applicable to claim 10. Thus, claim 10 is not obvious over Matchett in view of Mukohzaka and Okubo. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 10.

Claims 11 and 12 depend from claim 10 and include all of the elements thereof. Therefore, claims 11 and 12 are not obvious over Matchett in view of Mukohzaka and Okubo for at least the same reasons as claim 10. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 11 and 12.

Regarding the rejection of claim 15, Applicants respectfully submit claim 15 defines a machine readable medium having embodied thereon instructions, which when executed by an electronic system, causing the electronic system to store a first identity reference and collected biometric data to a database, sample the collected biometric data over time, integrate the samples of collected biometric data to create a second identity reference and replace the first identity reference with the second identity reference to establish an updated first identity reference similar to claims 1 and 10 discussed above.

Therefore, Applicants respectfully submit the discussion above regarding the combination of Matchett, Mukohzaka and Okubo failing to teach or suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference is equally applicable to claim 15. Thus, claim 15 is not obvious over Matchett in view of Mukohzaka and Okubo. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 15.

Claims 16-17 and 20 depend from claim 15 and include all of the elements thereof. Therefore, claims 16-17 and 20 are not obvious over Matchett in view of Mukohzaka and Okubo for at least the same reasons as claim 15. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 16-17 and 20.

**B. Obvious over Matchett in view of Mukohzaka and Okubo, and in further view of Bianco**

The Examiner rejects claims 8 and 20 under 35 U.S.C. § 103(a) as being obvious over Matchett in view of Mukohzaka and Okubo, and in further view of U.S. Patent No. 6,256,737 issued to Bianco, et al. ("Bianco"). Applicants respectfully traverse the rejection.

Regarding the rejection of claim 8, claim 8 depends from claim 1 and contains all of the limitations thereof. Therefore, Applicants respectfully submit that the discussion above regarding Matchett, Mukohzaka and Okubo failing to teach or suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference in claim 1 is equally applicable to an obviousness rejection of claim 8. Thus, the combination of Matchett, Mukohzaka and Okubo fails to teach or suggest each of the elements of claim 8.

The Examiner relies on Bianco to cure the defects of Matchett, Mukohzaka and Okubo. The Examiner characterizes Bianco as disclosing a biometric authentication system geared toward enterprise networks that place user biometric data on a "biometric server" that stores the "collection of data required by the system to authenticate users". Paper No. 6, pages 4-5 (citing Bianco, col. 2, lines 57-58). The Examiner does not cite Bianco for teaching or suggesting integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference.

In addition, Applicants in reviewing Bianco are unable to discern any sections of Bianco that teach or suggest at least these elements. Therefore, Bianco fails to cure the defects of Matchett and Mukohzaka. Thus, claim 8 is not obvious over Matchett in view Mukohzaka and Okubo, and in further view of Bianco. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 8.

Regarding the rejection of claim 20, claim 20 depends from claim 15 and contains all of the elements thereof. In addition, as discussed above, claim 15 includes elements similar to claim 8.

Therefore, the discussion above regarding the failure of the combination of Matchett, Mukohzaka, Okubo and Bianco failing to teach or suggest each of the elements of claim 8 is equally applicable to claim 20. Therefore, Bianco fails to cure the defects of Matchett, Mukohzaka and Okubo. Thus, claim 20 is not obvious over Matchett in view Mukohzaka and Okubo, and in further view of Bianco. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 20.

**C. Obvious over Matchett in view of Mukohzaka and Okubo, and in further view of Dalude**

The Examiner rejects claims 5, 14 and 19 under 35 U.S.C. § 103(a) as being obvious over Matchett in view of Mukohzaka and Okubo, and in further view of U.S. Patent No. 6,310,966 issued to Dalude ("Dalude"). Applicants respectfully traverse the rejection.

Regarding the rejection of claim 5, claim 5 depends from claim 1 and contains all of the limitations thereof. Therefore, Applicants respectfully submit that the discussion above regarding Matchett, Mukohzaka and Okubo failing to teach or suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference in claim 1 is equally applicable to claim 5. Thus, the combination of Matchett, Mukohzaka and Okubo fails to teach or suggest each of the elements of claim 5.

The Examiner relies on Dalude to cure the defects of Matchett, Mukohzaka and Okubo. The Examiner characterizes Dalude as teaching a system wherein biometric identity data in the form of a digital certificate is attached to user data. See Paper No. 6, Page 5. Applicants respectfully submit Dalude fails to cure the defects of Matchett, Mukohzaka and Okubo. The Examiner does not cite Dalude for teaching or suggesting integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference.

In addition, Applicants in reviewing Dalude are unable to discern any sections of Dalude that teach or suggest at least these elements. Therefore, Dalude fails to cure the defects of Matchett,

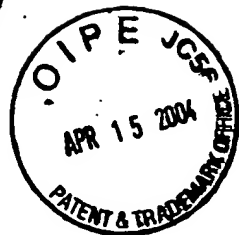


Mukohzaka and Okubo. Thus, claim 5 is not obvious over Matchett in view Mukohzaka and Okubo, and in further view of Dalude. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 5.

Regarding the rejection of claims 14 and 19, these claims depend from claims 10 and 15, respectively, and contain all of the elements thereof. Therefore, the discussion above regarding the combination of Matchett, Mukohzaka and Okubo failing to teach or suggest each of the elements of claims 10 and 15 is equally applicable to claims 14 and 19. Therefore, the combination of Matchett, Mukohzaka and Okubo fails to teach or suggest each of the limitations of claims 14 and 19.

The Examiner relies on Dalude to cure the defects of Matchett, Mukohzaka and Okubo. Applicants respectfully submit that claims 14 and 19 contain elements similar to claim 5 discussed above. Therefore, the discussion above regarding Dalude failing to cure the defects of Matchett, Mukohzaka and Okubo is equally applicable to similar elements defined in claims 14 and 19. Therefore, Dalude fails to cure the defects of Matchett, Mukohzaka and Okubo.

The failure of Dalude to cure the defects of Matchett, Mukohzaka and Okubo is fatal to the rejection. Therefore, claims 14 and 19 are not obvious over Matchett in view of Mukohzaka and Okubo, and in further view of Dalude. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 14 and 19.



### CONCLUSION

In view of the foregoing, it is believed that all claims now pending are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

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Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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*Thomas M. Coester*

Thomas M. Coester  
Reg. No. 39,637

12400 Wilshire Blvd.  
Seventh Floor  
Los Angeles, California-90025  
(310) 207-3800

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*Nadya Gordon*

Nadya Gordon

*4/12/04*

Date